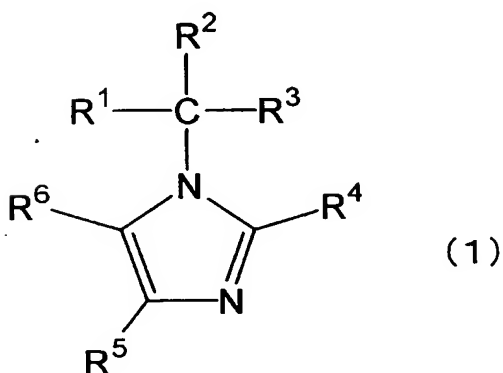


# CLAIMS

1. A positive tone radiation-sensitive resin composition comprising:

- 5 (A) compound shown by the following formula (1),  
 (B) a photoacid generator, and  
 (C) the following component (C-a) or (C-b),  
 (C-a) a resin protected by an acid-dissociable group, insoluble or scarcely soluble in alkali, but becoming soluble  
 10 in alkali when the acid-dissociable group dissociates or  
 (C-b) an alkali-soluble resin and an alkali solubility controller.



- 15 wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> individually represent a hydrogen atom, cyano group, substituted or unsubstituted alkyl group having 1-20 carbon atoms, substituted or unsubstituted alicyclic group having 3-20 carbon atoms, substituted or  
 20 unsubstituted alkenyl group having 2-20 carbon atoms, substituted or unsubstituted aryl group, or substituted or

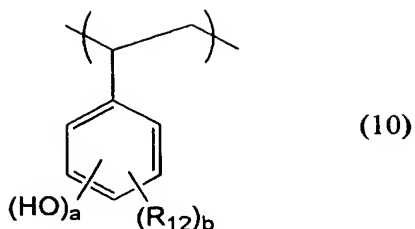
unsubstituted heteroaryl group, provided that any two groups selected from  $R^1$ ,  $R^2$ ,  $R^3$ ,  $R^4$ ,  $R^5$ , and  $R^6$  may be bonded together to form a ring which may comprise a hetero atom or may bond together to form a dimer.

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2. The radiation-sensitive resin composition according to claim 1, wherein the photoacid generator (B) is at least one compound selected from the group consisting of onium salt compounds, sulfone compounds, sulfonate compounds,  
10 sulfonimide compounds, diazomethane compounds, disulfonylmethane compounds, and oximesulfonate compounds.

3. The radiation-sensitive resin composition according to claim 1, wherein the photoacid generator (B) is at least one  
15 compound selected from the group consisting of onium salt compounds and oximesulfonate compounds.

4. The radiation-sensitive resin composition according to claim 1, wherein the resin (C-a) protected by an  
20 acid-dissociable group, insoluble or scarcely soluble in alkali, but becoming soluble in alkali when the acid-dissociable group dissociates comprises a recurring unit of the following formula (10),

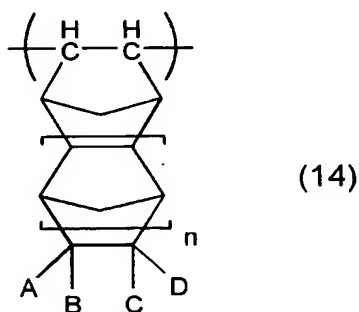


wherein  $R_{12}$  represents a hydrogen atom or monovalent organic group and  $a$  and  $b$  indicates a natural number from 1 to 3.

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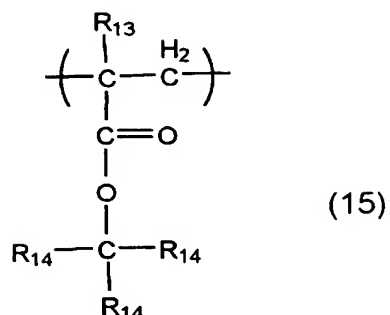
5. The radiation-sensitive resin composition according to claim 1, wherein the resin (C-a) protected by an acid-dissociable group, insoluble or scarcely soluble in alkali, but becoming soluble in alkali when the acid-dissociable group dissociates, comprises at least one of the recurring units of the following formulas (14) or (15),

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15 wherein A and B individually represent a hydrogen atom or an acid-dissociable group, at least one of A and B being an acid-dissociable group, D and E individually represent a hydrogen atom or a linear or branched monovalent alkyl group

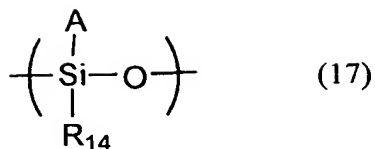
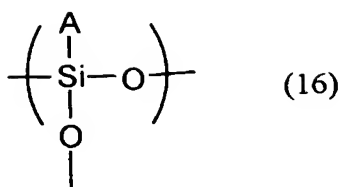
having 1-4 carbon atoms, and n is an integer of 0 to 2, or



5 wherein  $\text{R}_{13}$  represents a hydrogen atom or methyl group and  $\text{R}_{14}$  individually represents a linear or branched alkyl group having 1-4 carbon atoms or a substituted or unsubstituted monovalent alicyclic hydrocarbon group having 4-20 carbon atoms, or any two of  $\text{R}_{14}$  groups form, in combination with the carbon atom to  
 10 which the two  $\text{R}_{14}$  groups bond, a divalent alicyclic hydrocarbon group having 4-20 carbon atoms, with the remaining  $\text{R}_{14}$  group being a linear or branched alkyl group having 1-4 carbon atoms or a substituted or unsubstituted monovalent alicyclic hydrocarbon group having 4-20 carbon atoms.

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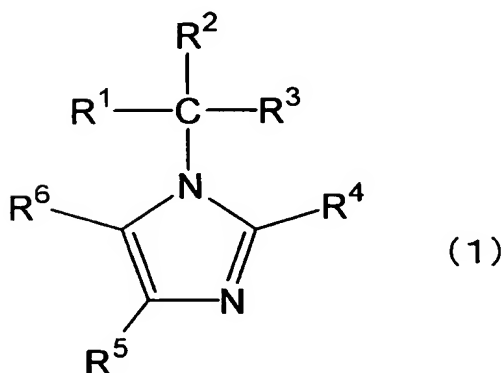
6. The radiation-sensitive resin composition according to claim 1, wherein the resin (C-a) protected by an acid-dissociable group, insoluble or scarcely soluble in alkali, but becoming soluble in alkali when the acid-dissociable group  
 20 dissociates, comprises at least one of the recurring units of the following formulas (16) or (17),



wherein A individually represents a monovalent organic group having an acid-dissociable group and R<sub>14</sub> represents a substituted or unsubstituted, linear, branched, or cyclic hydrocarbon group having 1-20 carbon atoms.

7. A negative tone radiation-sensitive resin composition comprising:

- (A) compound shown by the following formula (1),  
 (B) a photoacid generator,  
 (D) an alkali-soluble resin, and  
 (E) a compound that can crosslink the alkali-soluble resin in the presence of an acid.



wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> individually represent a

hydrogen atom, cyano group, substituted or unsubstituted alkyl group having 1-20 carbon atoms, substituted or unsubstituted alicyclic group having 3-20 carbon atoms, substituted or unsubstituted alkenyl group having 2-20 carbon atoms, substituted or unsubstituted aryl group, or substituted or unsubstituted heteroaryl group, provided that any two groups selected from R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup>, R<sup>5</sup>, and R<sup>6</sup> may be bonded together to form a ring which may comprise a hetero atom or may bond together to form a dimer.

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8. The radiation-sensitive resin composition according to claim 7, wherein the photoacid generator (B) is at least one compound selected from the group consisting of onium salt compounds, sulfone compounds, sulfonate compounds, sulfonimide compounds, diazomethane compounds, disulfonylmethane compounds, and oximesulfonate compounds.

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9. The radiation-sensitive resin composition according to claim 7, wherein the photoacid generator (B) is at least one compound selected from the group consisting of onium salt compounds and oximesulfonate compounds.

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